

### **REMARKS**

Claim 18 is provisionally rejected under nonstatutory obviousness-type double patenting over claim 52 of application no. 10/503,217. The rejection is respectfully traversed. The remarks below regarding the 102 rejection are incorporated herein. Claim 52 of the '217 application does not disclose or suggest a composite waveform formed by the addition of sine components as required by claim 18 in the present case. While claim 52 mentions "component", the disclosure makes clear that this consists of a sequence of sine waves and not a composite wave formed by the addition of components as required and defined by the equations and language of claim 18 in the present case.

In the advisory action, the Examiner points to claims 51 and 52 of the "conflicting application", but there is no disclosure of a composite waveform. A sequence of multiple sine waves supports claims 51 and 52 as described on page 13, lines 16-24. There, a "triply encoded particle" was prepared by sequence of 520nm, 610nm and 700nm waveforms for different lengths of time. The Examiner in the advisory action does not address that "composite" means the addition of multiple components. Nowhere does the reference discuss a composite waveform, as defined by the equations.

New claim 43 is also added, and specifically requires "adding multiple sine waveforms together in a computer memory to form a composite waveform that will be used to control etching of the semiconductor or insulator substrate, wherein the composite waveform has a pattern that will generate an optical signature in the reflectivity spectrum in response to illumination, the optical signature including a grey scale code." In signals and systems, the addition of waves is well-known to be different than a sequence of waves, but this point is ignored in the office action regarding claim 18. New claim 43 specifically requires the addition of two sine waves together. The addition of waves produces a composite waveform. The addition of a sine wave A having a particular amplitude and phase to a sine wave B having a particular amplitude and phase produces a composite waveform C of unique amplitude and phase (if the phase of A and B were different) from either wave A or wave B. Nowhere does the prior '217 application disclose a composite waveform.

Claims 18, 20-24, and 26-42 stand rejected under 102(a) based upon Sailor WO03067231. The rejection is respectfully traversed. The previous remarks are incorporated by reference, but will not be repeated. The Examiner's "response to arguments" will be specifically addressed.

The Examiner states that Sailor 231's disclosure of "modulating the etching density periodically (i.e. a frequency)..." (emphasis by Examiner) "...with a pseudo sine wave..." (emphasis by Applicants) "between 11.5 and 34.6 mA/cm<sup>2</sup>" (emphasis by Examiner) anticipates the features of claim 18. Etching with "a pseudo sine wave" and modulating the amplitude as described on page 10 of Sailor is a sequence of sine waves having different amplitudes. Each sine wave in the sequence is "a sine wave", and does not disclose (or suggest) the claim 18 "etching waveform formed by the addition of at least two separate sine components" that is, as defined in Eq. (4) of claim 18, a "composite waveform used to drive the electrochemical etch". It is the composite waveform defined in claim 18 that is not disclosed or suggested by Sailor. The composite waveform enables the large number predetermined coding as was previously discussed. The Sailor publication discloses sequential coding with single component waves that can result in the multi-layer structures, but does not disclose or suggest the method of claim 18. The differences between composite waveforms and sequential waveforms is discussed further above and addressed the Examiner's comments in the advisory action.

Separately, Sailor '231 does not qualify as prior art. The publication date of Sailor '231 is August 14, 2003. The invention as defined in claim 18 was reduced to practice prior to August 14, 2003. See, attached Sailor declaration. As a result, Sailor '231 was not "described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent" as required by 35 U.S.C. 102(a). This is a separate and complete basis to remove the rejection under 35 U.S.C. 102(a).

In the advisory action, the Examiner stated that pages 4 and 5 of the declaration were not legible. Another copy is uploaded herewith. The PDF version that is uploaded is legible. If the Examiner finds the additional copy not legible, then please contact the undersigned attorney to go over the portions believed illegible and determine if there is a difference in quality of the PDF version after uploading.

For all of the above reasons, Applicant believes that that present case is condition for allowance, and notice of the same is respectfully requested. Should the Examiner believe that any outstanding issues exist or that a teleconference would expedite prosecution, then the Examiner is invited to contact the undersigned attorney at the below-listed number.

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